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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/534,939 03/24/00 DISTEFANO

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EXAMINER

000530
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MM91/0215

GRAYBILL, D

ART UNIT

PAPER NUMBER

2814

DATE MAILED:

02/15/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/534,939

Applicant(s)

DISTEFANO ET AL.

Examiner

David E Graybill

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

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Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 6, 7, 15, 16 and 19 the term "frangible" is a vague relative term of degree for which the disclosure provides no clear standard for measuring the degree, or it is not apparent if the degree is limited by the disclosure, and one of ordinary skill in the art, in view of the prior art and the status of the art, would not otherwise be reasonably apprised of the scope of the term.

In claims 18, the scope of the term "hoop-like" is unclear because the metes and bounds of the exemplary term "like" are not defined and cannot otherwise be determined. See MPEP § 2173.05(d)

In claim 19 the term "said frangible elements" lacks sufficient literal antecedent basis.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1 and 4-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Angelucci (4380042).

At column 4, line 13 to column 6, line 41, Angelucci teaches the following:

1. A semiconductor chip mounting component comprising:

(a) a support structure 20, 28 having a top surface, bottom surface, and a gap 26 extending through said support structure between said surfaces;

(b) a plurality of electrically conductive leads 25, each said lead having a connection section extending across said gap, said connection section having a first end 23 disposed on the support structure on one side of the gap, a second end 35 secured to said support structure on an opposite side of said gap, and a frangible section 36;

(c) at least one elongated bus 38 disposed alongside said gap, wherein each of said leads extends across said gap and is connected to the bus.

4. The component of claim 1, wherein the gap includes at least one elongated slot and wherein each of the leads extends across one of the elongated slots.

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5. The component of claim 4, wherein at least one of said elongated buses is disposed alongside each of said elongated slots.
6. The component of claim 1, wherein the frangible sections of at least some of the leads are disposed adjacent the second ends of said leads.
7. The component of claim 6, wherein the frangible sections of at least some of the leads are disposed adjacent the first ends of said leads.
8. The component of claim 1, further comprising a polymeric reinforcement 20 in contact with each said lead.
9. The component of claim 1, wherein the bus is comprised of a metallic material.
10. The component of claim 1, wherein the support structure includes a dielectric layer 20.
11. The component of claim 10, wherein the dielectric layer is flexible.
12. The component of claim 10, wherein the support structure further includes a compliant layer 20.
13. The component of claim 11, wherein the support structure includes a said dielectric layer defining a top surface of said support and said compliant layer defining a bottom surface of said support.

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14. The component of claim 13, wherein the leads are disposed on the dielectric layer.

15. The component of claim 1, wherein the connection section and the frangible section of each lead are formed integrally with one another and with the associated bus, the connection section of each lead defining a pair of opposed horizontal edges, and the frangible lead section of each lead having a pair of notches extending horizontally inwardly from said opposed edges to define a neck having a width less than the width between said edges.

16. The component of claim 15, wherein each said lead has a second end securement section extending between the frangible section and the associated bus.

Claims 1 and 17-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Hayward (4801999).

At column 6, lines 6-53; and column 7, lines 38-45, Hayward teaches the following:

1. A semiconductor chip mounting component comprising:

(a) a support structure 122, 160 having a top surface, bottom surface, and a gap extending through said support structure between said surfaces;

(b) a plurality of electrically conductive leads 128, each said lead having a connection section extending across said gap, said

connection section having a first end disposed on the support structure on one side of the gap, a second end secured to said support structure on an opposite side of said gap, and a frangible section;

(c) at least one elongated bus 122 disposed alongside said gap, wherein each of said leads extends across said gap and is connected to the bus.

17. A component as claimed in claim 1, wherein said support structure includes a central portion 160 and a peripheral portion 122, said gap including a plurality of elongated slots extending substantially around said central portion so that the slots are disposed between the central portion and the peripheral portion, the component including a plurality of said elongated buses arranged on said peripheral portion so that one such bus extends alongside each said slot.

18. The component as claimed in claim 17, wherein said buses are connected to one another so that said buses cooperatively form a loop-like structure on said peripheral portion substantially surrounding said central portion and said slots.

19. The component as claimed in claim 18, wherein said slots are connected to one another to form substantially continuous channel surrounding said central portion, said central portion

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being connected to said peripheral portion only through said leads, whereby said central portion will be detached from said peripheral portion upon breakage of said frangible elements.

Although Hayward does not appear to explicitly teach a frangible section, this is an inherent property of the leads because the leads can be readily or easily broken.

Also, although Hayward does not appear to explicitly teach the limitation, "whereby said central portion will be detached from said peripheral portion upon breakage of said frangible elements," this is an inherent property of the product of Hayward because the central portion is attached to the peripheral portion by the leads having the inherently frangible elements.

Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Nelson (5459634).

At column 4, line 64 to column 6, line 7, Nelson teaches the following:

1. A semiconductor chip mounting component comprising:
 - (a) a support structure 18 having a top surface, bottom surface, and a gap 32 extending through said support structure between said surfaces;
 - (b) a plurality of electrically conductive leads 28, each said lead having a connection section extending across said gap, said

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connection section having a first end disposed on the support structure on one side of the gap, a second end secured to said support structure on an opposite side of said gap, and a frangible section;

(c) at least one elongated bus 36 disposed alongside said gap, wherein each of said leads extends across said gap and is connected to the bus.

2. The component of claim 1, wherein the gap includes a plurality of holes.

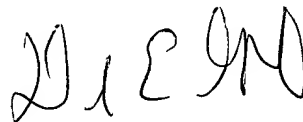
3. The component of claim 2, wherein at least one of the leads extends across each of the holes.

Although Nelson does not appear to explicitly teach a frangible section, this is an inherent property of the leads because the leads can be readily or easily broken.

Any telephone inquiry of a general nature or relating to the status (MPEP 203.08) of this application or proceeding should be directed to the group receptionist whose telephone number is 703-308-1782.

Any telephone inquiry concerning this communication or earlier communications from the examiner should be directed to David E. Graybill at (703) 308-2947. Regular office hours: Monday through Friday, 8:30 a.m. to 6:00 p.m.

The fax phone number for group 2800 is 703/305-3431.



David E. Graybill
Primary Examiner
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D.G.

7-Feb-01